

## CLAIMS:

1. A combustible coil or stick for controlling mosquitoes, the coil or stick comprising a substrate and an insecticidally effective amount of bifenthrin, wherein an oxygen supplier or accelerator is included in the coil or stick in an amount of from 0 - 1% w/w and the bifenthrin is present in an amount of about 0.002 - 0.6 % w/w, such that upon combustion of the coil or stick the bifenthrin is released at a rate of about 0.02 mg/h - 12 mg/h to control mosquitoes.
- 10 2. A combustible coil or stick for controlling mosquitoes, the coil or stick comprising an insecticidally effective amount of bifenthrin in an amount of about 0.002 - 0.6 % w/w and a substrate that includes an oxygen supplier or accelerator in an amount of from 0 - 1% w/w, wherein the coil or stick is adapted to permit release of the bifenthrin from the coil or stick at a rate of about 0.02 mg/h-12 mg/h upon combustion of the coil or stick.
- 15 3. The combustible coil or stick according to claim 1 or 2 wherein the mosquitoes are controlled by killing.
- 20 4. The combustible coil or stick according to any one of claims 1-3 wherein the bifenthrin is released from the coil or stick at a rate of about 0.12 mg/h-3.75 mg/h.
- 25 5. The combustible coil or stick according to any one of claims 1-3 wherein the bifenthrin is released from the coil or stick at a rate of about 0.3 mg/h-1.5 mg/h.
6. The combustible coil or stick according to any one of claims 1-5 wherein the bifenthrin is present in an amount of about 0.008-0.25 %w/w.
- 30 7. The combustible coil or stick according to any one of claims 1-5 wherein the bifenthrin is present in an amount of about 0.02-0.1 % w/w

8. The combustible coil or stick according to any one of claims 1-7 wherein the coil or stick has a weight of approximately 2-4 g.
9. The combustible coil or stick according to any one of claims 1-7 wherein the coil or stick has a weight of approximately 4-8 g.
10. The combustible coil or stick according to any one of claims 1-7 wherein the coil or stick has a weight of approximately 8-16 g.
- 10 11. The combustible coil or stick according to any one of claims 1-7 wherein the coil or stick has a weight of approximately 10-20 g.
12. The combustible coil or stick according to any one of claims 1-7 wherein the coil or stick has a weight of approximately 12-24 g.
- 15 13. A combustible coil or stick for killing mosquitoes comprising a substrate and an insecticidally effective amount of bifenthrin, wherein an oxygen supplier or accelerant is included in an amount of from 0 - 1% w/w and the bifenthrin is present in an amount of about 0.02-0.1% w/w, such that upon combustion of the coil or stick the bifenthrin is released at a rate of about 0.3 mg/h-1.5 mg/h to kill mosquitoes.
- 20 14. A combustible coil or stick for killing mosquitoes, the coil or stick comprising an insecticidally effective amount of bifenthrin in an amount of about 0.02 - 0.1% w/w and a substrate that includes an oxygen supplier or accelerant in an amount of from 0 - 1% w/w, wherein the coil or stick is adapted to permit release of the bifenthrin from the coil or stick at a rate of about 0.3 - 1.5 mg/h upon combustion of the coil or stick.

15. The combustible coil or stick according to any one of claims 1-14, wherein the substrate comprises a combustible fuel and a binder agent.
16. The combustible coil or stick according to claim 15 wherein the combustible fuel is selected from one or more of the group consisting of wood, sawdust, cardboard, coconut shell, leaves, nutshells, jute, sugarcane bagass, rice husks, tea and coffee refuse.
17. The combustible coil according to claim 15 or 16 wherein the binder agent is selected from one or more of the group consisting of starch, tamarind starch, tamarind kernal powder, guar gum and gum (joss) powder.
18. The combustible coil according to any one of claims 15-17 wherein the substrate further comprises one or more additives selected from the group consisting of emulsifying agents, retardants, preservatives, colouring agents and perfumes.
19. A combustible coil or stick for controlling mosquitoes consisting of:
  - 50-95%w/w combustible fuel material;
  - 5-40%w/w binding agent;
  - 0-1%w/w preservative;
  - 0-1%w/w oxygen supplier or accelerator;
  - 0-5%w/w retardant;
  - 0-5%w/w colouring agent;
  - 0-1%w/w perfume;
  - 0-1%w/w emulsifying agent;
  - 0.002-0.6%w/w bifenthrin.
20. A combustible coil or stick for controlling mosquitoes consisting of:
  - 35-40%w/w coconut shell;
  - 25-50%w/w wood powder;
  - 0.5-15%w/w gum (joss) powder;

0-20%w/w tapioca starch;  
0-0.5%w/w sodium benzoate;  
0-1%w/w potassium nitrate;  
0-1%w/w colouring agent;  
5 0-1%w/w perfume;  
0-10%w/w guar gum;  
0-20%w/w tamarind starch;  
0.008-2.6%w/w bifenthrin EC (23.34% bifenthrin).

10 21. A method for controlling mosquitoes, the method comprising burning a coil or stick according to any one of claims 1-20 so as to allow the bifenthrin to release from the coil or stick into the atmosphere at a rate of 0.02 mg/h - 12 mg/h to control mosquitoes.

15 22. The method according to claim 21 wherein the bifenthrin releases from the coil or stick at a rate of about 0.12 mg/h – 3.75 mg/h.

20 23. The method according to claim 21 wherein the bifenthrin releases from the coil or stick at a rate of about 0.3 mg/h - 1.5 mg/h.

24. A method of producing a combustible coil or stick according to any one of claims 1-20, the method comprising the steps of: a) providing a substrate that includes 0 - 1% w/w oxygen supplier or accelerant; b) combining an insecticidally effective amount of bifenthrin with the substrate; and c) shaping the substrate; wherein the substrate is shaped before or after the addition of bifenthrin.

25 25. The method according to claim 24 wherein the method comprises the steps of:  
a) combining one or more combustible fuels, one or more binder agents  
30 and optionally one or more preservatives to form a dry mix;

- b) combining an insecticidally effective amount of bifenthrin with an emulsifying agent to form an emulsified bifenthrin concentrate;
- c) forming a dispersion of emulsified bifenthrin in water;
- d) adding the dispersion of emulsified bifenthrin to the dry mix with mixing to form a dough;
- 5 e) shaping the dough into coils or sticks; and
- f) drying the coils or sticks.

26. A method of producing a combustible stick according to any one of claims 1-20, 10 the method comprising the steps of: a) providing a stick adapted to receive a substrate; b) providing a substrate that includes 0 - 1% w/w oxygen supplier or accelerant; c) combining an insecticidally effective amount of bifenthrin with the substrate; and d) applying the substrate to the stick; wherein the substrate is applied to the stick before or after the addition of bifenthrin.

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27. The method according to claim 26, the method comprising the steps of:

- a) providing a stick and optionally coating the stick with an adhesive agent;
- b) providing a substrate comprising a combustible fuel material and binding agent;
- 20 c) applying the substrate to the stick by rolling the stick in the substrate; rolling thin sheets of the substrate around the stick; or extruding or moulding the substrate around the stick;
- d) dipping the stick in or spraying the stick with a solution containing bifenthrin and optionally perfume.

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28. The method according to claim 27 wherein the adhesive agent is gum or glue.

29. Use of an insecticidally effective amount of bifenthrin in a combustible coil or stick for controlling mosquitoes, wherein the coil or stick includes 0 - 1% w/w oxygen supplier or accelerant and 0.002-0.6% w/w of bifenthrin is impregnated within and/or coated onto the coil or stick.  
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30. The method of any one of claims 24 - 28 or the use according to claim 29 wherein the bifenthrin is present in an amount of about 0.008 – 0.25 %w/w.
- 10 31. The method of any one of claims 24 - 28 or the use according to claim 29 wherein the bifenthrin is present in an amount of about 0.02 - 0.1 % w/w.